/ Descriptions

SOT-23 NPN Silicon NPN Digital transistor in a SOT-23 Plastic Package.

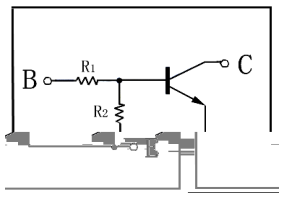
/ Features

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process,HF Product.

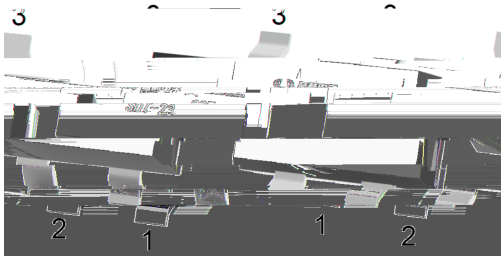
/ Applications

Switching, inverter circuit, interface circuit and driver circuit applications.

/ Equivalent Circuit



/ Pinning



PIN 1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

Marking	H43

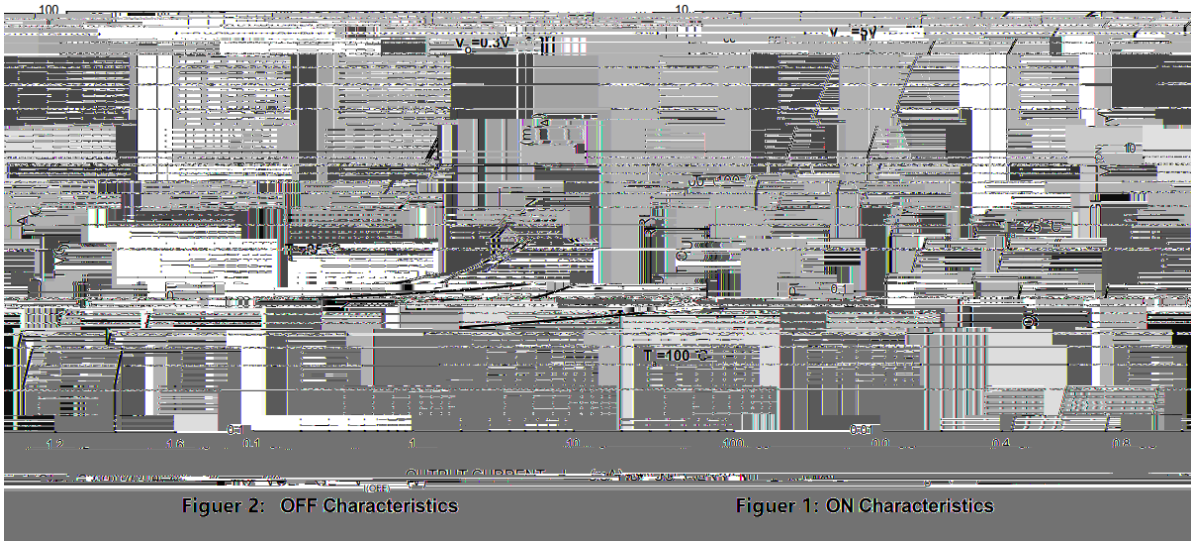
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Output Voltage	V_{CC}	50	V
Input Voltage	V_{In}	20	V
		-7.0	V
Output Current	I_O	100	mA
Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

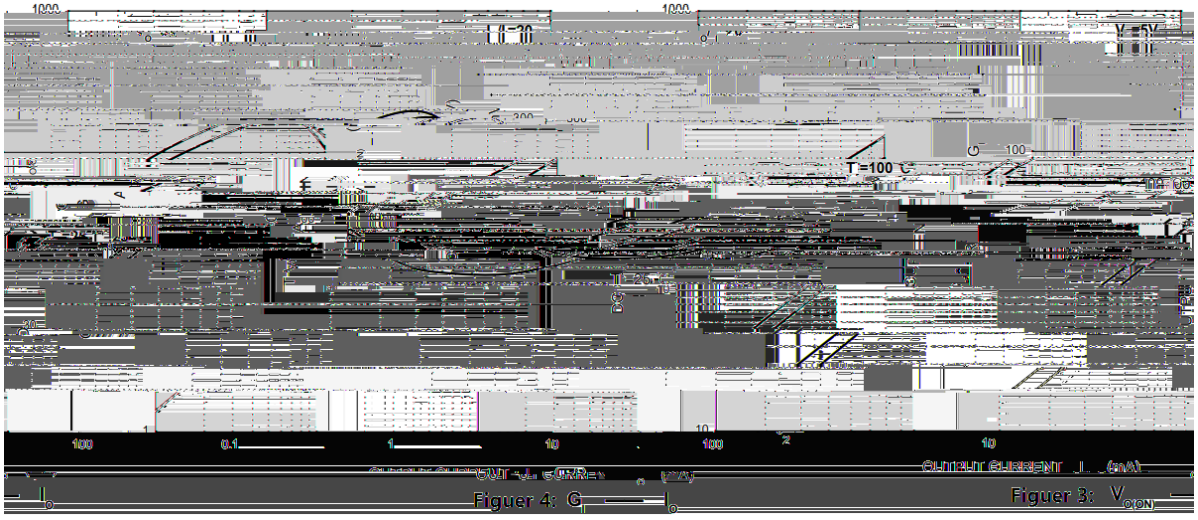
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage	$V_{I(off)}$	V_{CC}=5.0V I_O=100μA	0.3			V
	$V_{I(on)}$	V_O=0.3V I_O=20mA			2.5	V
Output Voltage	$V_{O(on)}$	I_O=10mA I_I=0.5mA		0.1	0.3	V
Input Current	I_I	V_I=5.0V			1.8	mA
Output Cut-off Current	$I_{O(off)}$	V_{CC}=50V V_I=0V			0.5	μA
DC Current Gain	G_I	V_O=5.0V I_O=10mA	30			
Transition Frequency	f_T	V_{CE}=10V I_C=5.0mA f=100MHz		250		MHz
Resistance1	R_1		3.29	4.7	6.11	KΩ
Resistance Ratio	R_2/R_1		1.7	2.1	2.6	

/ Electrical Characteristic Curve



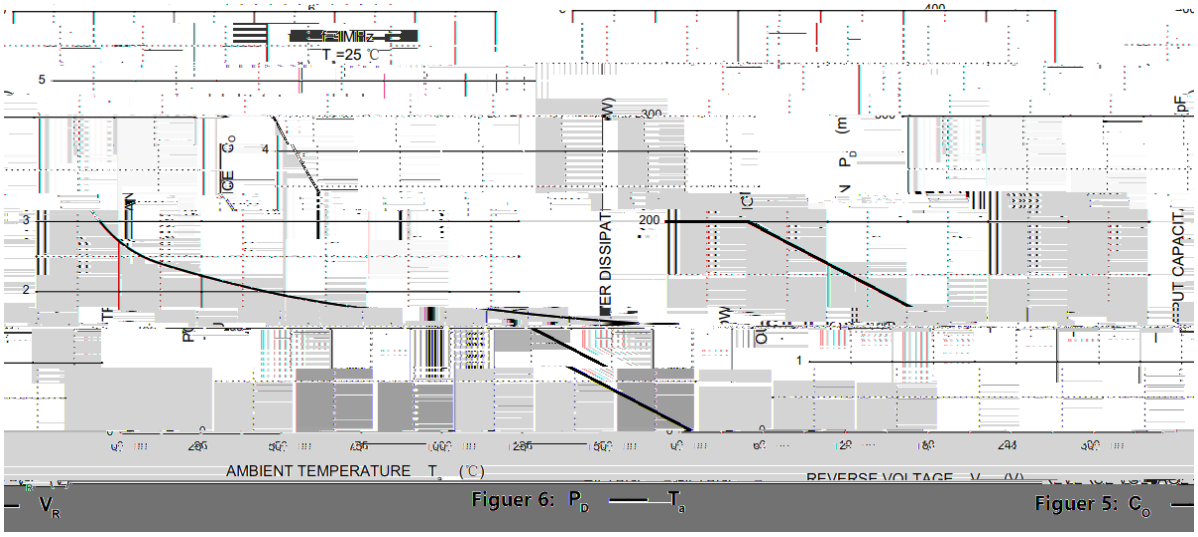
Figuer 2: OFF Characteristics

Figuer 1: ON Characteristics



Figuer 4: G_I

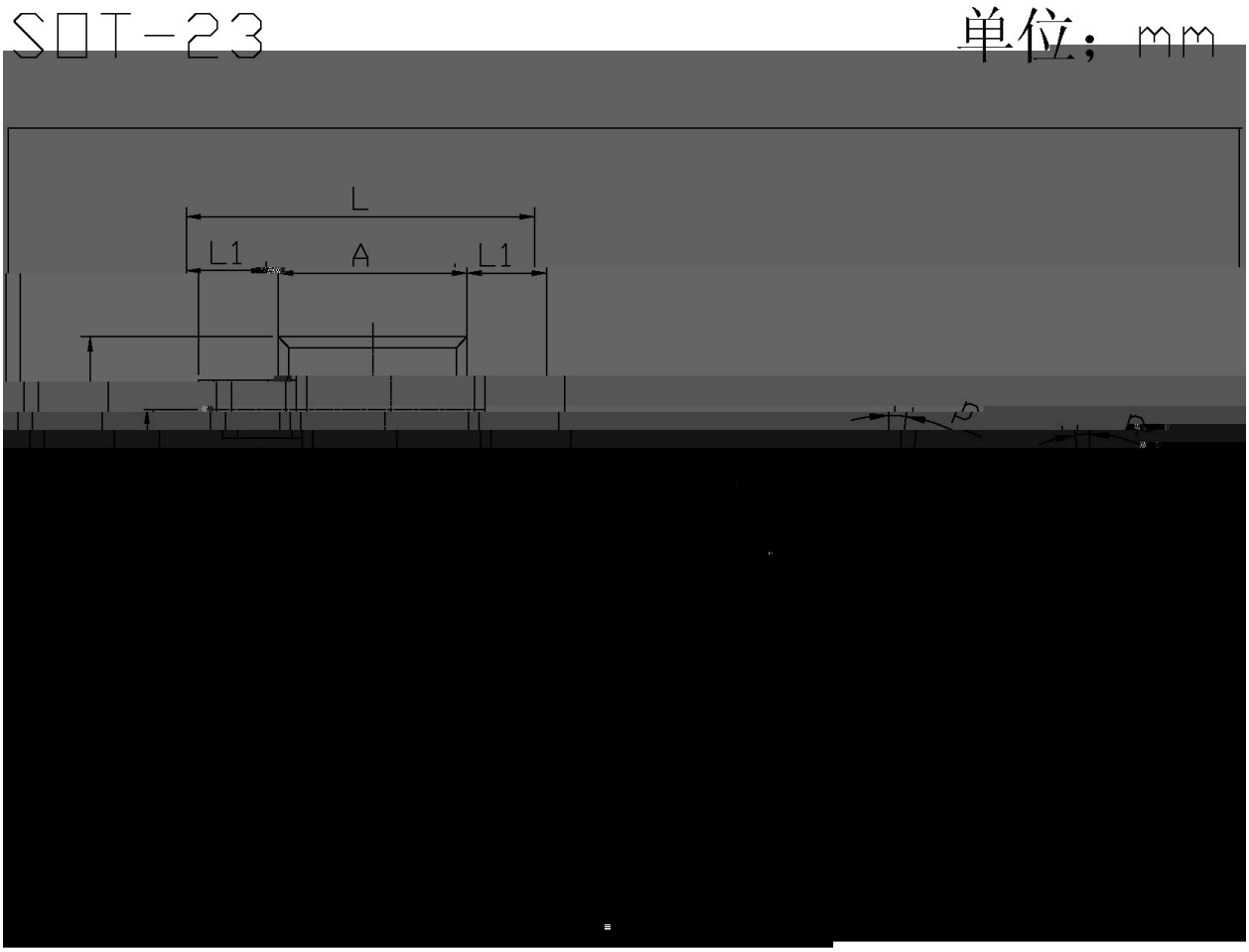
Figuer 3: $V_{O(ON)}$

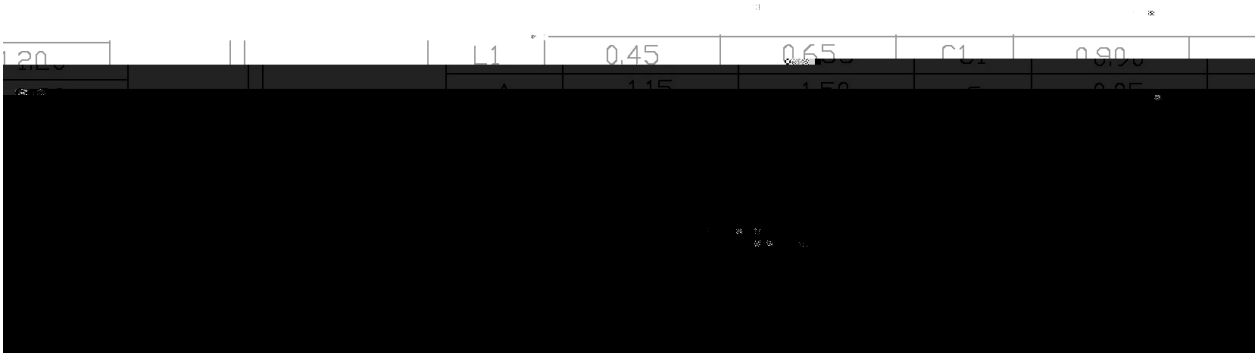


Figuer 6: P_D —— T_a

Figuer 5: C_O —— V_R

/ Package Dimensions





, M y ƒ / Marking Instructions

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43 y º Z W A

Note:

. y Company Code

43 y Product Type Code